

d. Remarks

AMENDMENTS

The amendments to claims 1, 2, and 13 are, e.g., supported between page 8, line 26, and page 9, line 7 of the original application and between page 7, line 25, and page 8, lines 6, of the priority provisional application.

OBVIOUSNESS REJECTIONS

A) At page 2, the Office Action rejects claims 1, 6 ,8, 10-13, and 15-19 as obvious over a combination of the article of Paiella et al published at IEEE Transactions on Photonics Technology Letters Vol. 12, No. 7 (2000) pages 780 – 782 (Herein, referred to as the “Paiella article”); U.S. Patent Application Publication 2002/0181059 of Christopher (Herein, referred to as Christopher.); U.S. Patent 6,816,682 of Ionov et al (Herein, referred to as Ionov.); and U.S. Patent 6,823,141 of Miyauchi et al (Herein, referred to as Miyauchi.).

Claim 1

As amended, claim 1 recites:

“the modulating including DC biasing the mid-IR laser to be 0.001 volts to 0.1 volts from a lasing threshold of the mid-IR laser”.

The Office Action does not cite a prior art teaching for such a feature. For example, such a feature is not disclosed by the Paiella article at page 781, last paragraph. In addition, the DC biasing disclosed at page 781, last paragraph, of the Paiella article does not necessarily require that the laser therein be DC biased to within 0.1 volts of its lasing threshold. Thus, the above feature of amended claim 1 is also not inherent in the Paiella article as applied in the Office Action.

In the absence of a cited prior art teaching of the above-recited feature, the Office Action does not provide a *prima facie* case of obviousness for amended claim 1, and the obviousness rejection should be withdrawn.

Claims 6, 8, and 10 – 12

Claim 6, 8, and 10 – 12 should be held as non-obvious over the art as applied in the Office Action, at least, by their dependence on amended claim 1.

Claim 13

As amended, claim 13 recites that:

“the modulator is configured to DC bias the mid-IR laser to be 0.001 volts to 0.1 volts from a lasing threshold of the mid-IR laser.”

The Office Action does not cite a prior art teaching for such a feature. In addition, the DC biasing disclosed at page 781, last paragraph, of the Paiella article does not necessarily require that the laser therein be DC biased to within 0.1 volts of its lasing threshold. Thus, the above feature of amended claim 13 is also not inherent in the Paiella article as applied in the Office Action.

In the absence of a cited prior art teaching of the above-recited feature, the Office Action does not provide a prima facie case of obviousness for amended claim 13, and the obviousness rejection should be withdrawn.

Claim 16 – 19

Claim 16 – 19 should be held as non-obvious over the art as applied in the Office Action, at least, by their dependence on amended claim 13.

B) At page 4, the Office Action rejects claims 2, 7, and 9 as obvious over a combination of the Paiella article, Christopher, and Ionov.

Claim 2

As amended, claim 2 recites that:

“the modulating including DC biasing the mid-IR laser to be 0.001 volts to 0.1 volts from a lasing threshold of the mid-IR laser”.

The Office Action does not cite a prior art teaching for such a feature. In addition, the DC biasing disclosed at page 781, last paragraph, of the Paiella article does not necessarily require the DC biasing of the laser to be within 0.1 volts of its lasing threshold. Thus, the above-recited limitation of amended claim 2 is not inherent in the Paiella article as applied in the Office Action.

In the absence of a cited prior art teaching of the above-recited feature, the Office Action does not provide a prima facie case of obviousness for amended claim 2, and the obviousness rejection should be withdrawn.

Claims 7 and 9

Claim 7 – 9 should be held as non-obvious over the art as applied in the Office Acton, at least, by their dependence on amended claim 2.

C) At page 6, the Office Action rejects claim 3 as obvious over a combination of the Paiella article, Christopher, Ionov, and U.S. Patent 6,549,556 of Hwang et al (Herein, referred to as Hwang).

Claim 3 should be held as non-obvious over the art as applied in the Office Acton, at least, by its dependence on amended claim 2.

D) At page 7, the Office Action rejects claim 20 as obvious over a combination of the Paiella article, Christopher, Ionov, Miyauchi, and U.S. Patent 6,016,212.

Claim 20 should be held as non-obvious over the art as applied in the Office Acton, at least, by its dependence on amended claim 13.

E) At page 8, the Office Action rejects claims 21 – 22 as obvious over a combination of the Paiella article, Christopher, Ionov, Miyauchi, and Hwang.

Claims 21 – 22 should be held as non-obvious over the art as applied in the Office Acton, at least, by their dependence on amended claim 13.

F) At page 9, the Office Action rejects claims 14 and 23 – 24 as obvious over a combination of the Paiella article, Christopher, Ionov, Miyauchi, and pages 177 – 180 of the book entitled Optical Networks: a Practical Perspective by Ramaswami et al (Academic Press 1998).

Claims 14 and 23 – 24 should be held as non-obvious over the art as applied in the Office Acton, at least, by their dependence on amended claim 13.

CONCLUSION

Applicants respectfully request allowance of claims 1 – 3 and 6 – 24 as presented herein.

In the event of any non-payment or improper payment of a required fee, the Commissioner is authorized to charge or to credit **Lucent Technologies Deposit Account No. 12-2325** to correct the error.

Respectfully,



John F. McCabe, Reg. No. 42,854
Telephone: 908-582-6866

Date: March 15, 2006

Lucent Technologies Inc.
Docket Administrator
101 Crawfords Corner Road (Rm. 3J-219)
Holmdel, New Jersey 07733